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invention, exhibits an improved harmonic quality compared to that of the input electronic audio signal.

IN THE CLAIMS

Please amend claims 31, 33, 35, 37 and 40 as follows:

31. (Twice Amended) An apparatus for enhancing the quality of an input audio signal produced from audible sound and having a band of frequencies with a high end and a low end, said apparatus comprising:

a circuit operatively adapted such that when an input audio signal having a [frequency] band of frequencies with a high end and a low end is transmitted therethrough, the input audio signal is distorted so as to [such that frequencies in the input audio signal] increase in amplitude as per increasing frequencies from a reference frequency up to an amplitude peak at a high frequency, and the reference frequency separates the band of frequencies into a band of high frequencies and a band of low frequencies, [and, after the high frequency, decrease in amplitude as per increasing frequencies toward the high end,] whereby an enhanced audio signal is produced such that audible sound reproduced from the enhanced audio signal exhibits a perceptively [an] improved harmonic quality and sound source separation compared to [that of] audible sound reproduced from the input audio signal.

33. (Twice Amended) The apparatus as recited in claims 31, wherein said circuit is further operatively adapted so that when the input audio signal is transmitted therethrough, the input audio signal is further distorted so as to [such that other frequencies in the input audio signal] increase in amplitude as per decreasing frequencies from the reference frequency toward the low end and up to an amplitude peak at a low frequency,

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wherein audible sound reproduced from the enhanced audio signal exhibits more of [an] a perceptively improved harmonic quality and sound source separation compared to [that of] audible sound reproduced from the input audio signal.

35. (Twice Amended) A method of enhancing the quality of electronic audio signals, comprising the steps of:

providing an input audio signal having a band of frequencies with a high end and a low end; and

distorting the input audio signal so as to [such that frequencies in the input audio signal] increase in amplitude as per increasing frequencies from a reference frequency up to an amplitude peak at a high frequency, and the reference frequency separates the band of frequencies into a band of high frequencies and a band of low frequencies, [and, after the high frequency, decrease in amplitude as per increasing frequencies toward the high end,] whereby an enhanced audio signal is produced such that audible sound reproduced from the enhanced audio signal exhibits a perceptively [an] improved harmonic quality and sound source separation compared to [that of] audible sound reproduced from the input audio signal.

37. (Twice Amended) The method as recited in claim 35, wherein said step of distorting also includes further distorting the input audio signal so as to [such that other frequencies in the input audio signal] increase in amplitude as per decreasing frequencies from the reference frequency toward the low end and up to an amplitude peak at a low frequency, wherein audible sound reproduced from the enhanced audio signal exhibits more of [an] a perceptively improved harmonic quality and sound source separation compared to [that of] audible sound reproduced from the input audio signal.

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40. (Amended) An apparatus for enhancing the quality of an input audio signal having a band of frequencies with a high end and a low end, said apparatus comprising:

a circuit operatively adapted such that when an input audio signal having a frequency band with a high end and a low end is transmitted therethrough, the input audio signal is distorted so as to [such that frequencies in the input audio signal] increase in amplitude as per increasing frequencies from a reference frequency toward the high end and up to an amplitude peak at a high frequency, and so as to [other frequencies in the input audio signal] increase in amplitude as per decreasing frequencies from the reference frequency toward the low end and up to an amplitude peak at a low frequency, where the reference frequency separates the band of frequencies into a band of high frequencies and a band of low frequencies, and whereby an enhanced audio signal is produced such that audible sound reproduced from the enhanced audio signal exhibits a perceptively [an] improved harmonic quality and sound source separation compared to [that of] audible sound reproduced from the input audio signal.

Please cancel claims 41 and 42, without prejudice or disclaimer.

Please add new claims 43 and 44 as follows:

43. (New) The apparatus as recited in claim 31, wherein said circuit also distorts the input audio signal so that after the high frequency, the input audio signal decreases in amplitude as per increasing frequencies toward the high end.

44. (New) The method as recited in claim 35, wherein